U.S. Department of the Interior
Bureau of Land Management

Willow Master Development Plan

Fall tundra in the Willow Master Development Plan Area
Photo by ABR, Inc.

Administrative Draft SEIS: Key Issues Workshop #2

Caribou and Subsistence

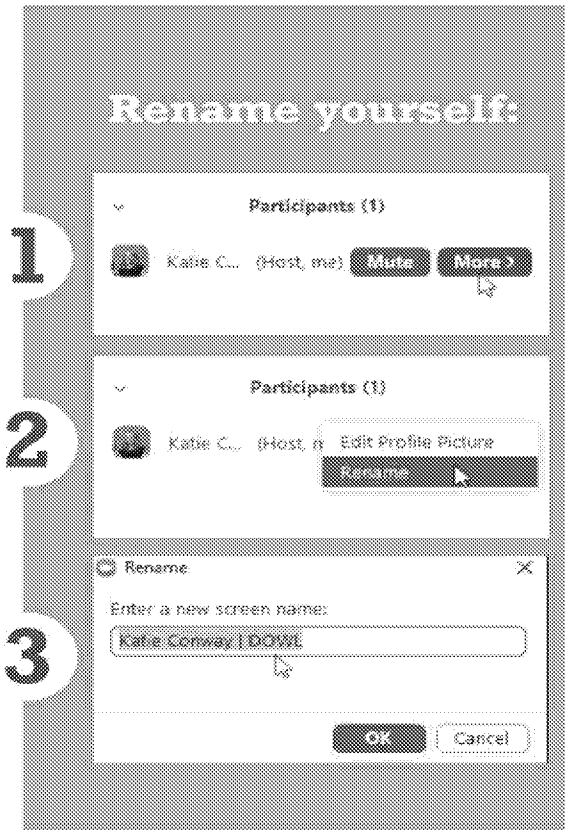
Cooperating Agency Meeting
March 23, 2022

The information contained in this presentation is preliminary and not for public distribution

Zoom Ground Rules & Requests

- Please keep your microphone muted.
- Use "Chat" to view the chat window or send a message.
- Select "Raise Hand" under "Reactions" to indicate you have a question/comment.
- Make sure you are identified by name and organizational affiliation. Open the "Participants" window, hover your mouse over your name, select "More" and then "Rename."
- If your connection cuts out this is the phone number you need to dial back into the meeting:

Ex. 6 Personal Privacy (PP)



Phone instructions:
***6 mute/un-mute**
***9 raise hand**

Agenda – Workshop #2

1. Welcome and Roll Call
2. Overview of Workshops and SEIS Format
3. Summary of Alternative E
4. Summary of Scoping Comments
5. Caribou – Summary of Updated Analysis
   - Key impacts and conclusions for Alternative E
   - Comparison with previous preferred alternative
6. Subsistence – Summary of Updated Analysis
   - Key impacts and conclusions for Alternative E
   - Comparison with previous preferred alternative
7. Questions Specific to Subsistence and Caribou

Overview of Workshops

The primary goal of these workshops is to assist cooperating agencies in their review of the Pre-Draft SEIS.

Workshop Schedule:

- Thursday, March 17, 1330-1530: How to Read the SEIS, Water Resources and Wetlands, Q&A
- Wednesday, March 23, 1330-1530: Caribou and Subsistence, Overview of Comments Received During Scoping, Q&A
- Tuesday, March 29, 1330-1630: Air Quality and Greenhouse Gas Emissions, General Q&A on all key resources

Format of SEIS (example below):

14 *3.8.2.6 Alternative E: Four-Pad Alternative**
15 Effects on water resources under Alternative E would be similar to those under Alternative B, with the following
16 differences (Table 3.8.4): there would be one fewer bridge, two fewer culvert batteries, and 35 fewer cross-
17 drainage culverts and thus fewer structures below OHW of rivers and streams to cause changes to hydrology and
18 water quality. However, Alternative E would require the use of 96 more VSMs below OHW to support pipelines

29 *3.8.2.7 Module Delivery Option 1: Atigaru Point Module Transfer Island*
30 Effects to water resources from module delivery options are summarized in Table 3.8.5. Some of the types of
31 effects are similar to those described above for the land-based alternatives.

Alternative E: Four-Pad Alternative

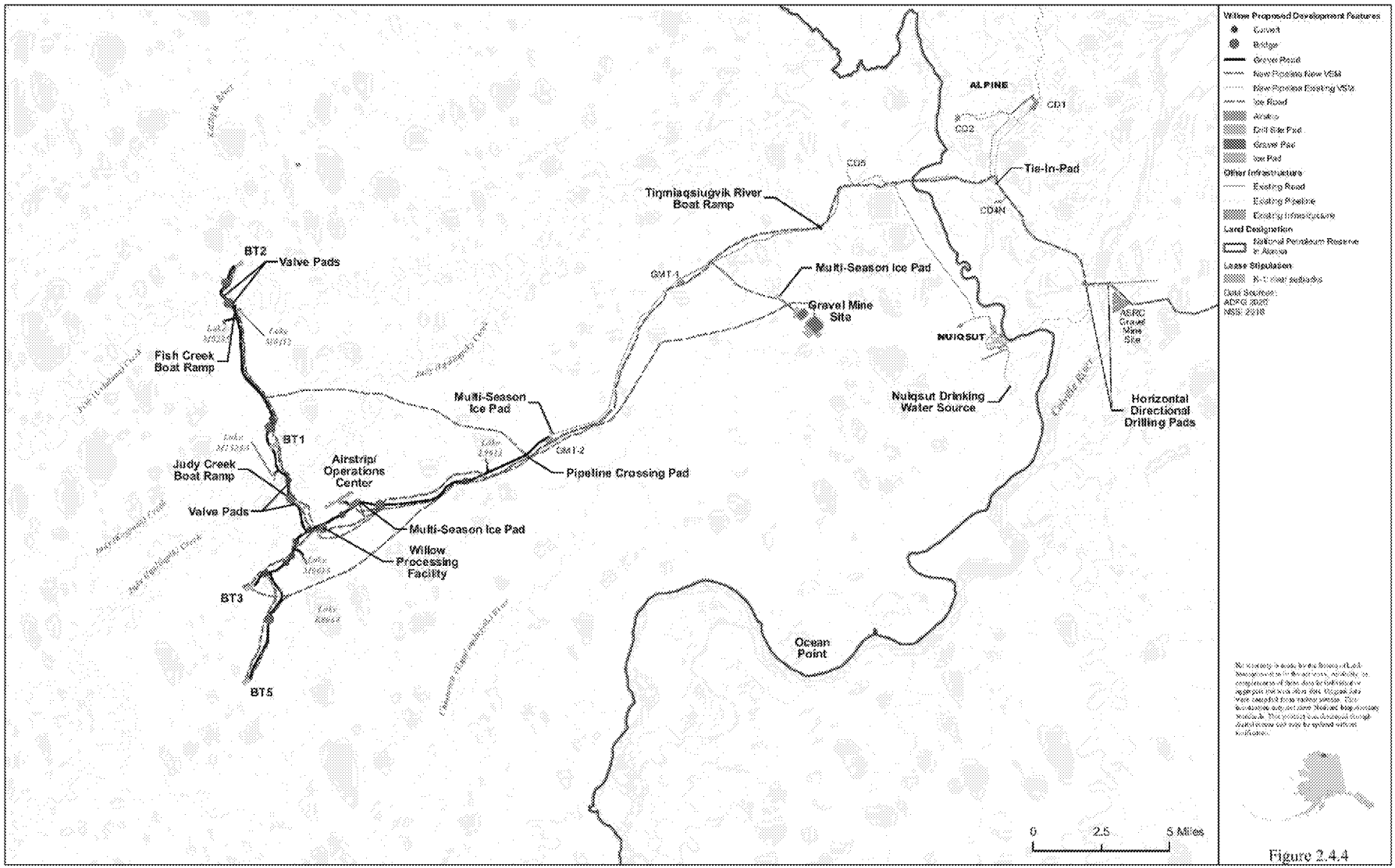


Figure 2.4.4

Overview of Workshops

30-Day Scoping Comment Period – *Closed on March 9, 2022*

Overview of Scoping Comments*

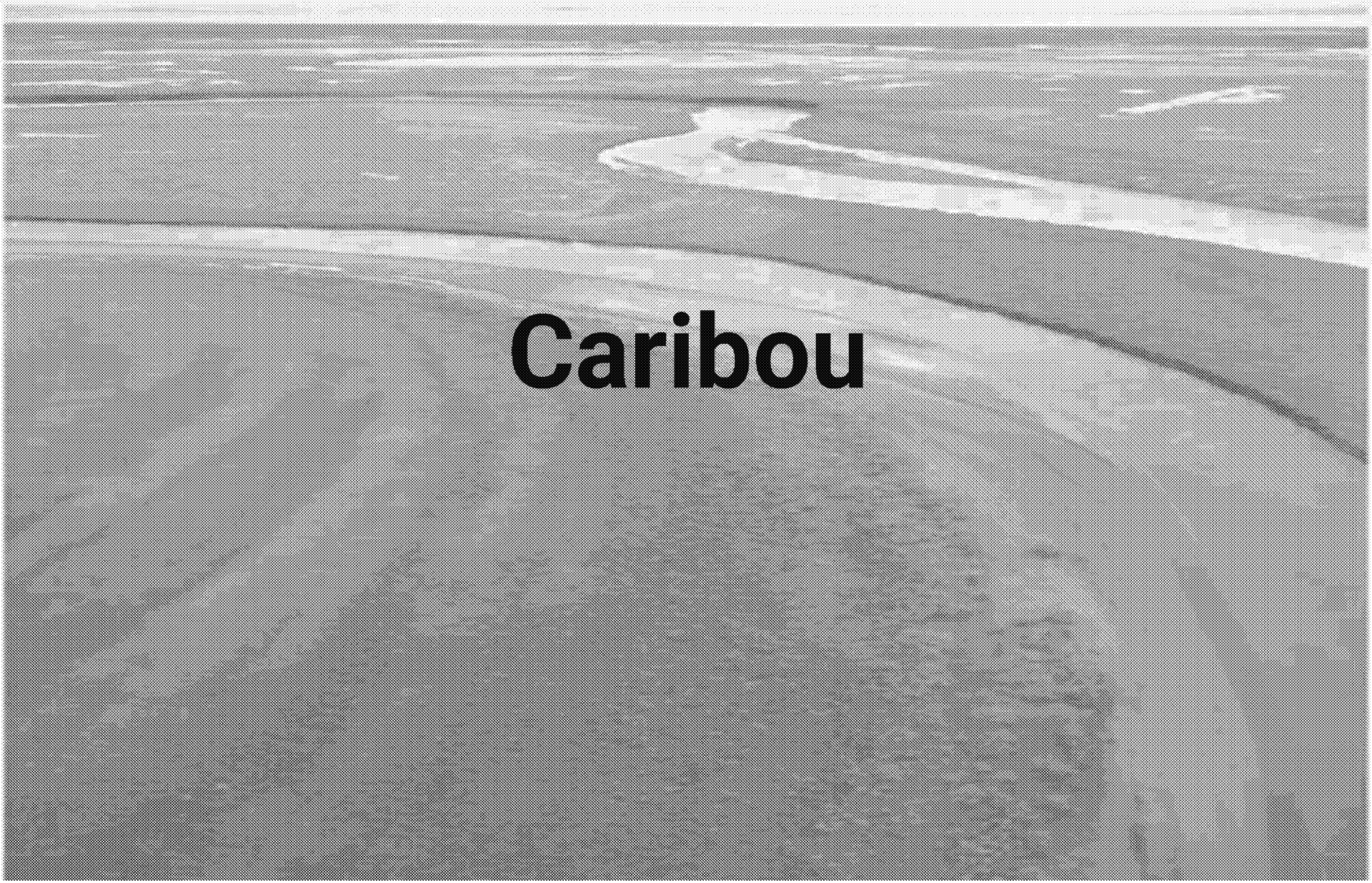
- Number of submittals: 43,664 (43,056 form letters)
- Number of unique form letters: 8
- Form letter submittals in support of the project: 35
- Form letter submittals in opposition to the project: 43,021
- Range of submittals per form letter: 2 to 28,005

**Note – these are preliminary numbers. Scoping comment analysis and development of the Scoping Report are underway.*

Overview of Workshops

Comment Themes

- Suggestions for additional alternatives / design options
  - Variations on a roadless alternative, disconnected drill sites, and seasonal drilling
  - ROD permitted project (3 drill sites)
  - Diesel pipeline
  - Mud plant location
  - Use the Alpine CPF
  - Phase development
  - Eliminate barging
  - Eliminate drill sites BT4 and BT5
- Requests for new or more detailed analysis
- Cumulative effects
- Mitigation and reclamation
- GHG analysis



Caribou

Caribou:

Subject Matter Expert:

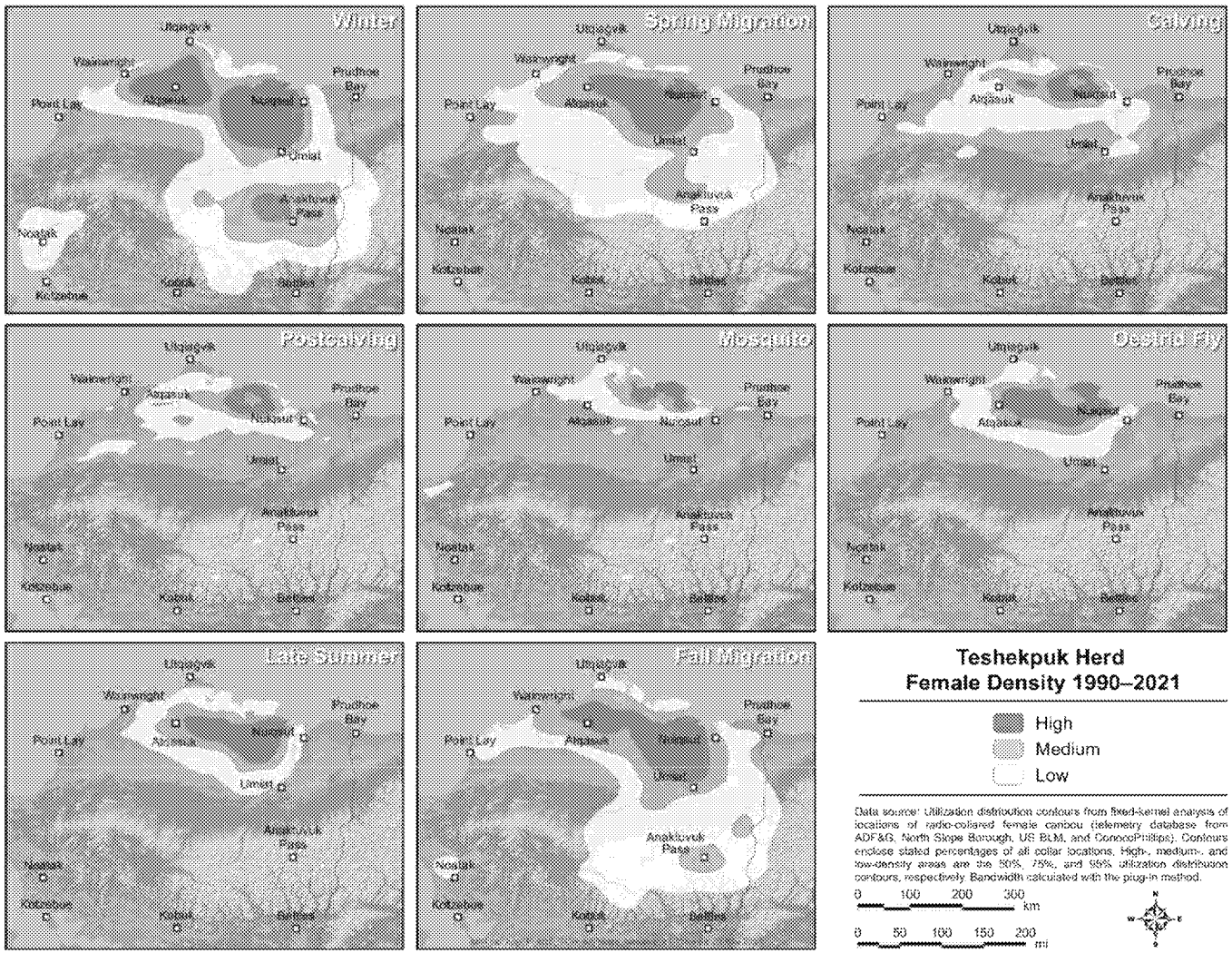
Alex Prichard – Senior Scientist at ABR, Inc. – Environmental Research & Services

- **Project Experience:**
  - 25 years studying caribou and reindeer in Alaska
  - 22 years experience studying caribou in and around oilfields
  - Worked on the Coastal Plain EIS and NPR-A IAP EIS

Caribou Background Information

- The Project area is primarily used by the Teshekpuk Caribou Herd. Central Arctic Herd caribou are occasionally in the area during mid-summer of some years.
- The Teshekpuk Herd was estimated to be approximately 56,000 animals in 2017.
- Most calving occurs near Teshekpuk Lake and the area north of Teshekpuk Lake is heavily used during periods of mosquito harassment.
- About 2/3 of the Teshekpuk Herd remains on the Coastal Plain during winter.

Teshekpuk Seasonal Herd Distribution (1990–2021; female caribou).



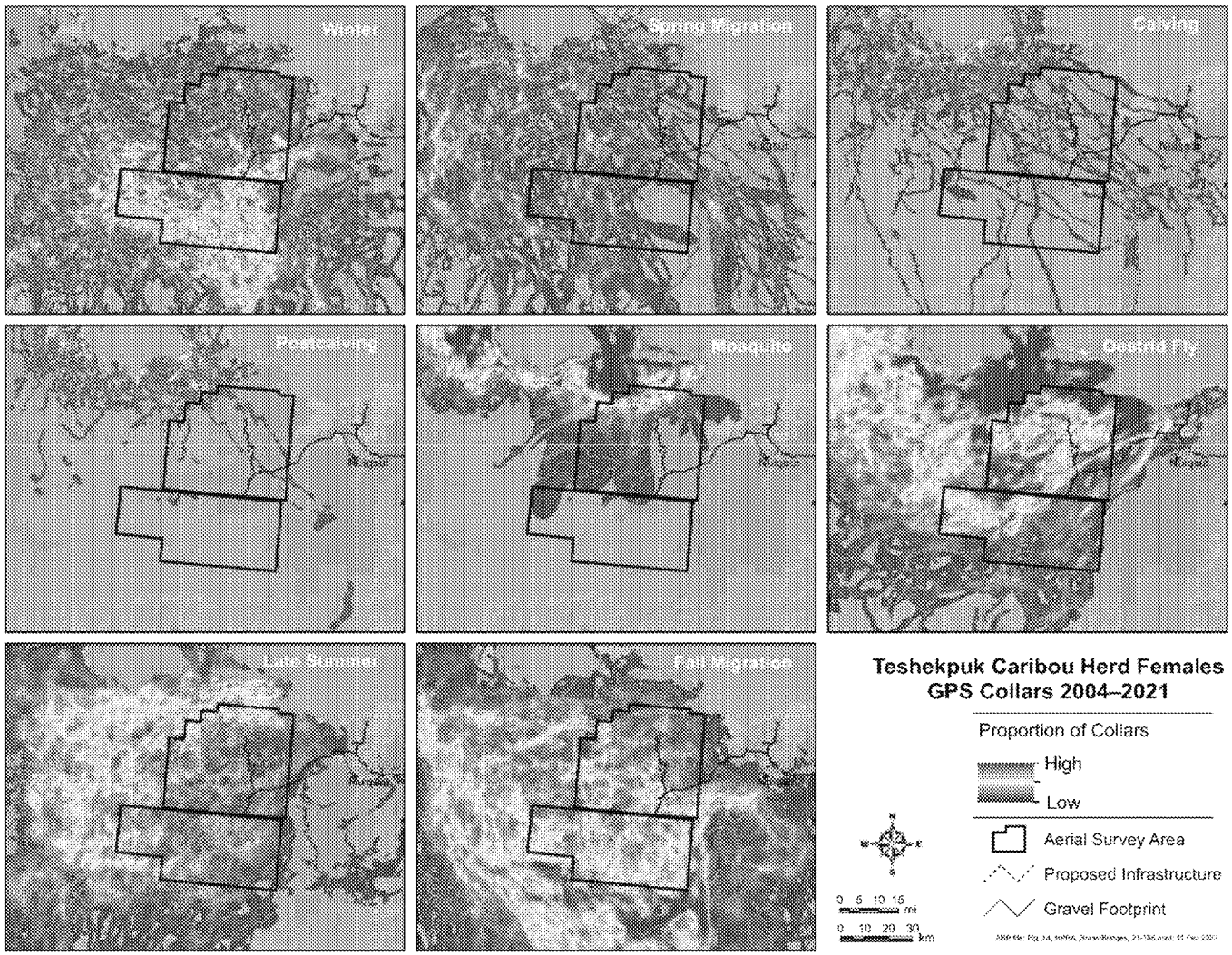
Major Potential Impacts of Oil Development on Caribou

- Female caribou often avoid areas near active roads and pads during calving (about 1–3 miles).
- Direct loss of habitat from gravel placement.
- Development could alter or hinder caribou movements resulting in use of areas with lower quality forage, more predators, or higher insect harassment levels.
- Disturbance from human activity could increase energetic costs for caribou or decrease their time spent feeding.
- Development could change the seasonal distribution patterns of caribou which could impact subsistence hunters.

Major Potential Impacts to Caribou in the Willow Area

- The Willow Development extends oil development closer to calving areas for the Teshekpuk Herd (still not in high density calving area).
- Few caribou use the Project Area during the mosquito season from late June to mid-July, so unlikely to hinder movements to the coast.
- Caribou currently exhibit high use of Fish and Judy Creek during late summer making access to those areas important.
- Development could potentially change movement patterns during important subsistence harvest periods.

Caribou Seasonal Movements in the Project Area (2004–2021; female caribou).



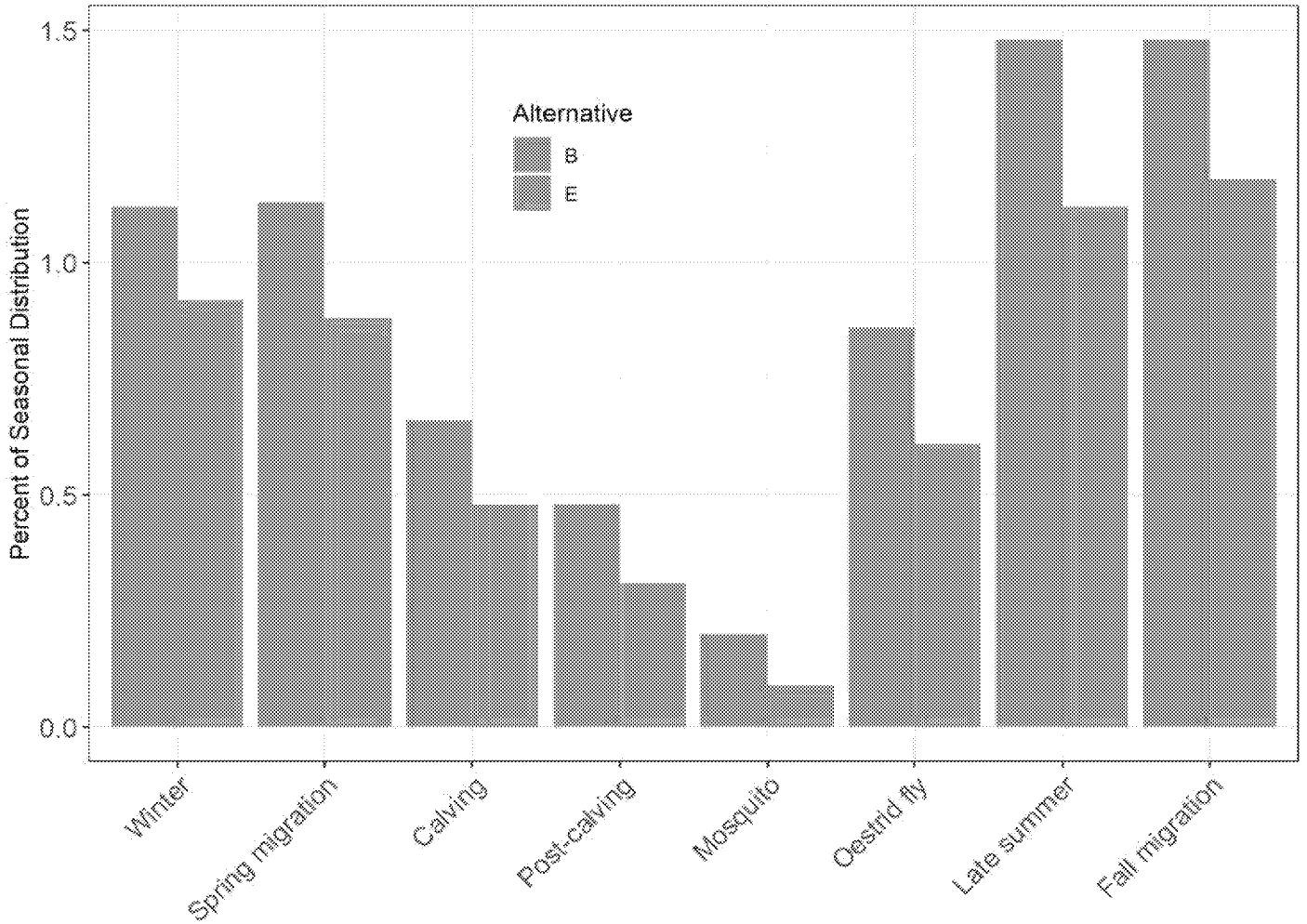
Updated Analysis / Key Impacts and Conclusions for Alternative E

- Reductions in road length will result in fewer caribou encountering Project roads. Potential road impacts include direct loss of habitat, avoidance of areas near roads, deflections of movements, and vehicle collisions.
- Reducing development in the TLSA reduces the potential for impacts to calving caribou (the season when caribou are most sensitive to disturbance).
- Reductions in human activity including vehicle traffic and aircraft trips will reduce disturbance to caribou.

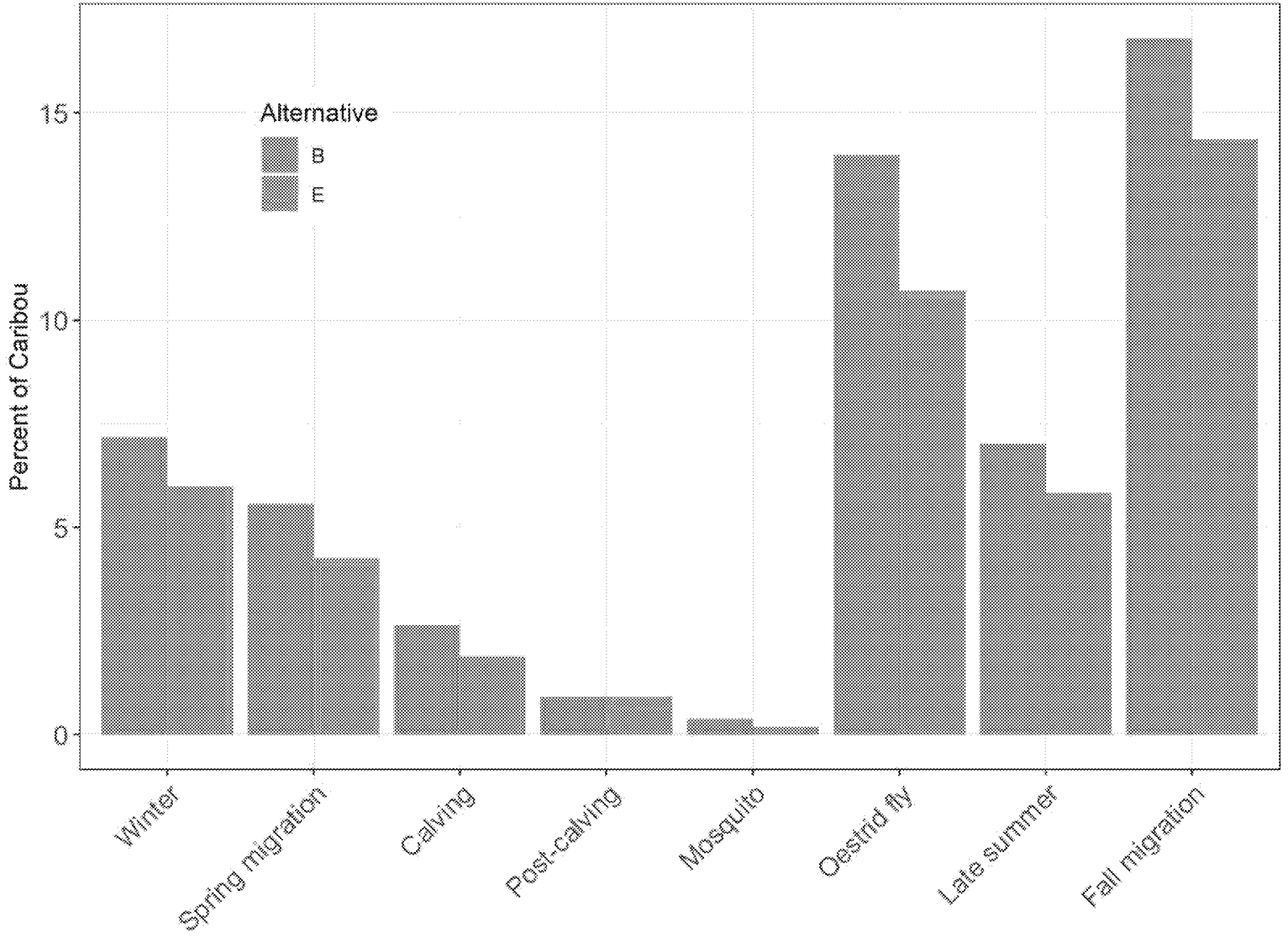
Change in the level of potential impacts under Alternatives B and E.

Potential Impact	Alternative B	Alternative E	Percent Change
Gravel Fill	619.8 acres	548.4 acres	–11.5%
Gravel Roads	94.4 miles	86.5 miles	–8.4%
Ice Road	495.2 miles	431.2 miles	–12.9%
Ground Traffic	3,188,910 total trips	3,143,870 total trips	–1.4%
Air Traffic	12,101 total fixed-wing trips	11,983 total fixed-wing trips	–1%
Distance to high density calving area	6.2 miles	10.5 miles	69.4%

Percent of seasonal distribution within 2.5 miles of roads (female caribou only)



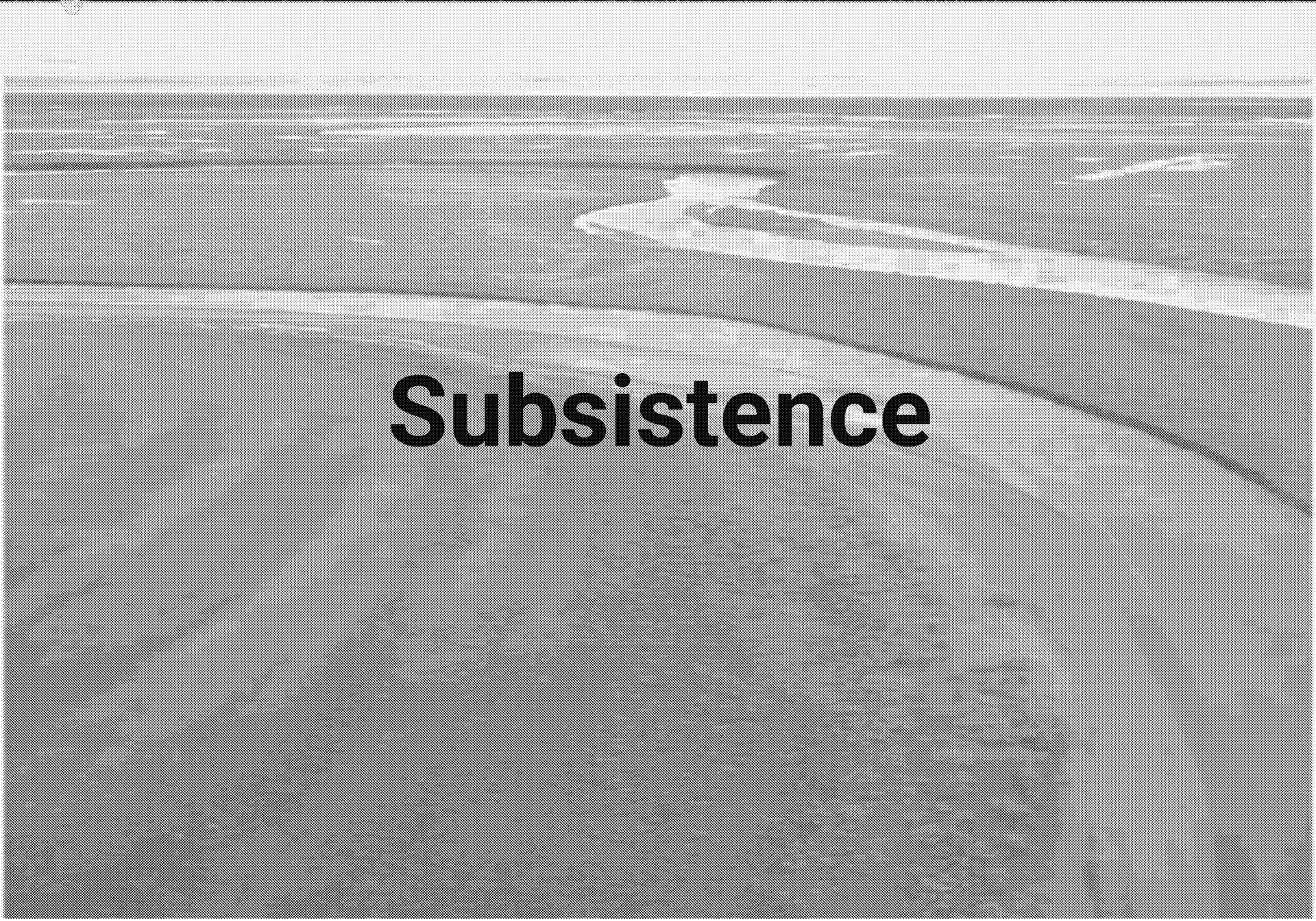
Crossing rates of caribou with GPS collars (female caribou only)



Conclusions

- Alternative E is expected to have a lower potential impact on caribou relative to Alternative B, primarily because it reduces the road length in the TLSA.
- There is a decrease in the percent of the herd range near Project roads and the percent of caribou crossing the Project road alignments relative to Alternative B.
- There will be small decreases in ground and air traffic relative to Alternative B.

Questions/Discussion



Subsistence

Subsistence:

Subject Matter Experts:

Stephen R. Braund & Associates (SRB&A)

- Stephen Braund – Owner, 44 Years experience
- Liz Sears – Senior Research Associate, 17 years experience
- Paul Lawrence – Senior Research Associate, 16 years experience

SRB&A Project-Related Experience

- Specialize in sociocultural, subsistence, and cultural resource research and analysis
- Conducted subsistence and traditional knowledge research on the North Slope, including Nuiqsut, since the early 1980s
- Currently in 13th year of the Nuiqsut Caribou Subsistence Monitoring Project

Updated Analysis / Key Impacts and Conclusions for Alternative E

- Subsistence Impact Categories:
  - Resource Abundance – are there population level effects?
  - Resource Availability – is local availability of a resource impacted?
  - Harvester Access – does project affect subsistence harvester's ability to get to the resource / traditional hunting grounds?

Updated Analysis / Key Impacts and Conclusions for Alternative E

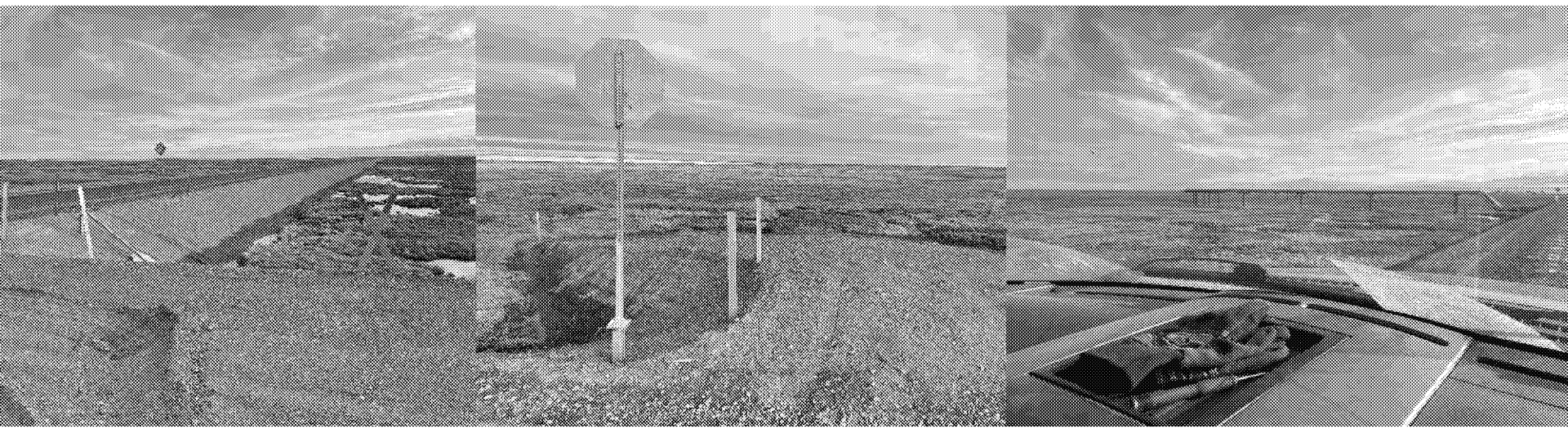
- Resource Abundance Impacts
  - Individual mortalities expected for:
    - Fish
    - Caribou
    - Wolf/Wolverine
    - Geese
  - No population-level effects are expected

Updated Analysis / Key Impacts and Conclusions for Alternative E

- Resource Availability Impacts
  - Potential reduced availability of:
    - Caribou – roads and traffic
    - Furbearers – roads and traffic / winter construction
    - Geese – especially if mining extends to geese hunting season
    - Fish – disturbance to local waterways, contamination concerns

Updated Analysis / Key Impacts and Conclusions for Alternative E

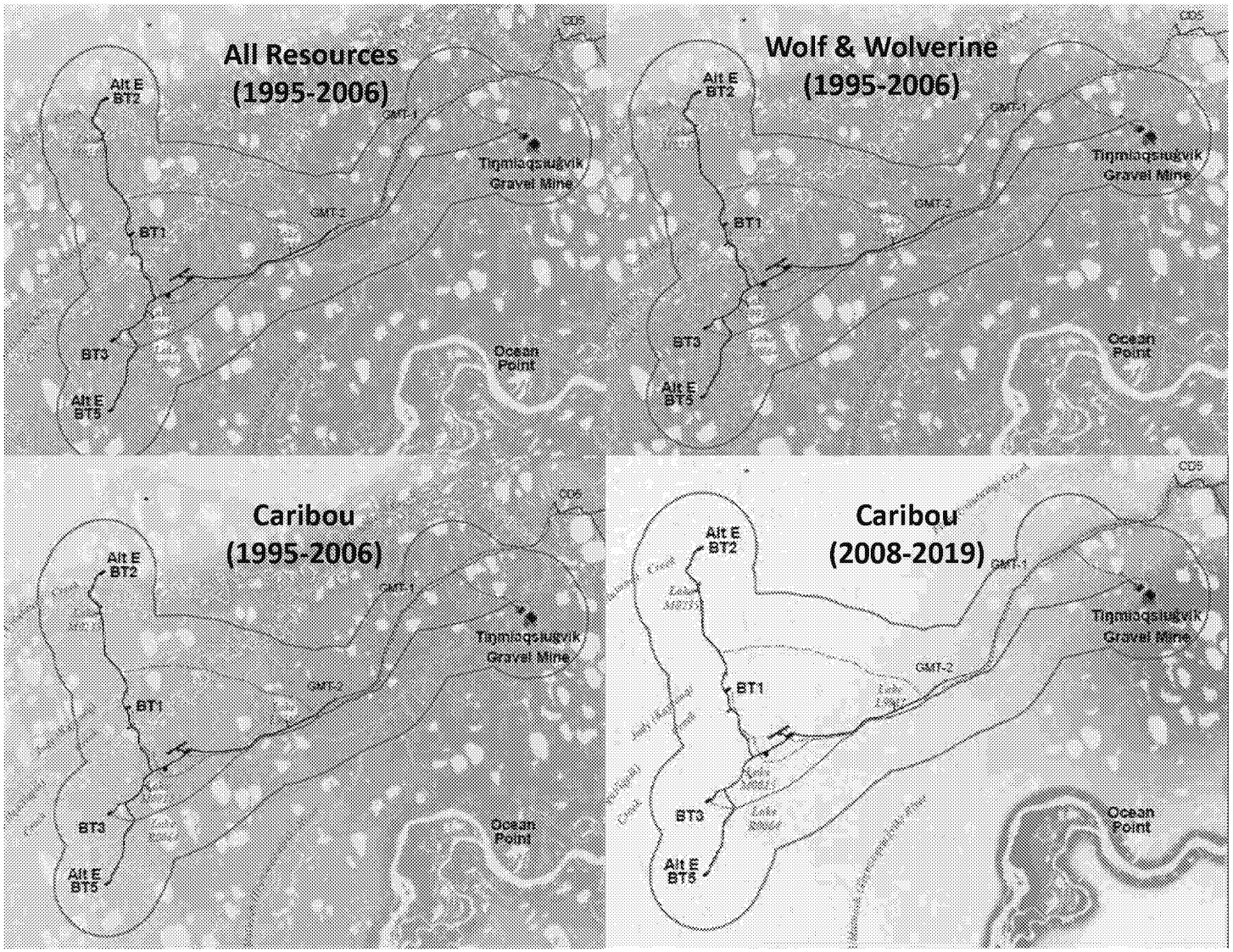
- Harvester Access Impacts
  - Impacts to harvester access will include
    - Physical barriers - overland travel / crossing roads / concerns shooting toward infrastructure



Updated Analysis / Key Impacts and Conclusions for Alternative E

- Harvester Access (cont.)
  - Impacts to harvester access also include
    - Security restrictions – standard industrial restrictions around facilities / interactions with personnel
    - Hunter avoidance - due to infrastructure/oil and gas activity
    - Increased access to roads – may mitigate the impacts of roads on migrating caribou, may increase competition between road hunters, may decrease/increase harvester costs depending on harvester preference or access to road vehicles

Alternative E with Nuiqsut Subsistence Use Areas



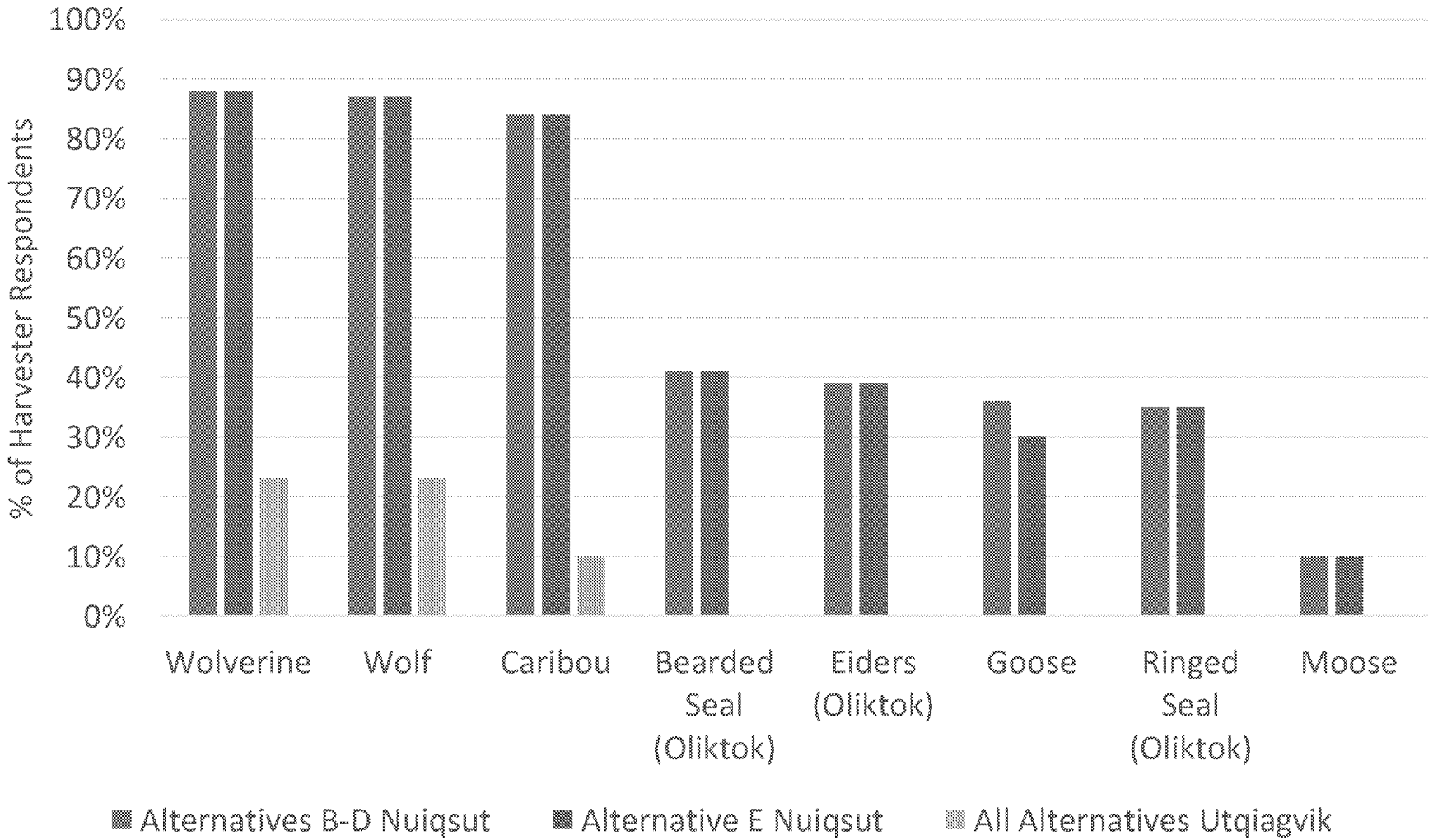
Updated Analysis / Key Impacts and Conclusions for Alternative E

- Harvester Access
  - Boat Ramps – help increase access
    - Fish Creek
    - Judy Creek
    - Ublutuoch River
      - Most likely to provide benefits
      - Provides access to areas already used by subsistence users

New Findings / Comparison with Previous Preferred Alternative

- Alt E has overall reduction in infrastructure
  - Alt B – 91% of harvesters used area
  - Alt E – 88% of harvesters used area
- Both Alts on periphery of Utqiagvik use area (wolf/wolverine, caribou)

% of Harvester Respondents Using Analysis Areas



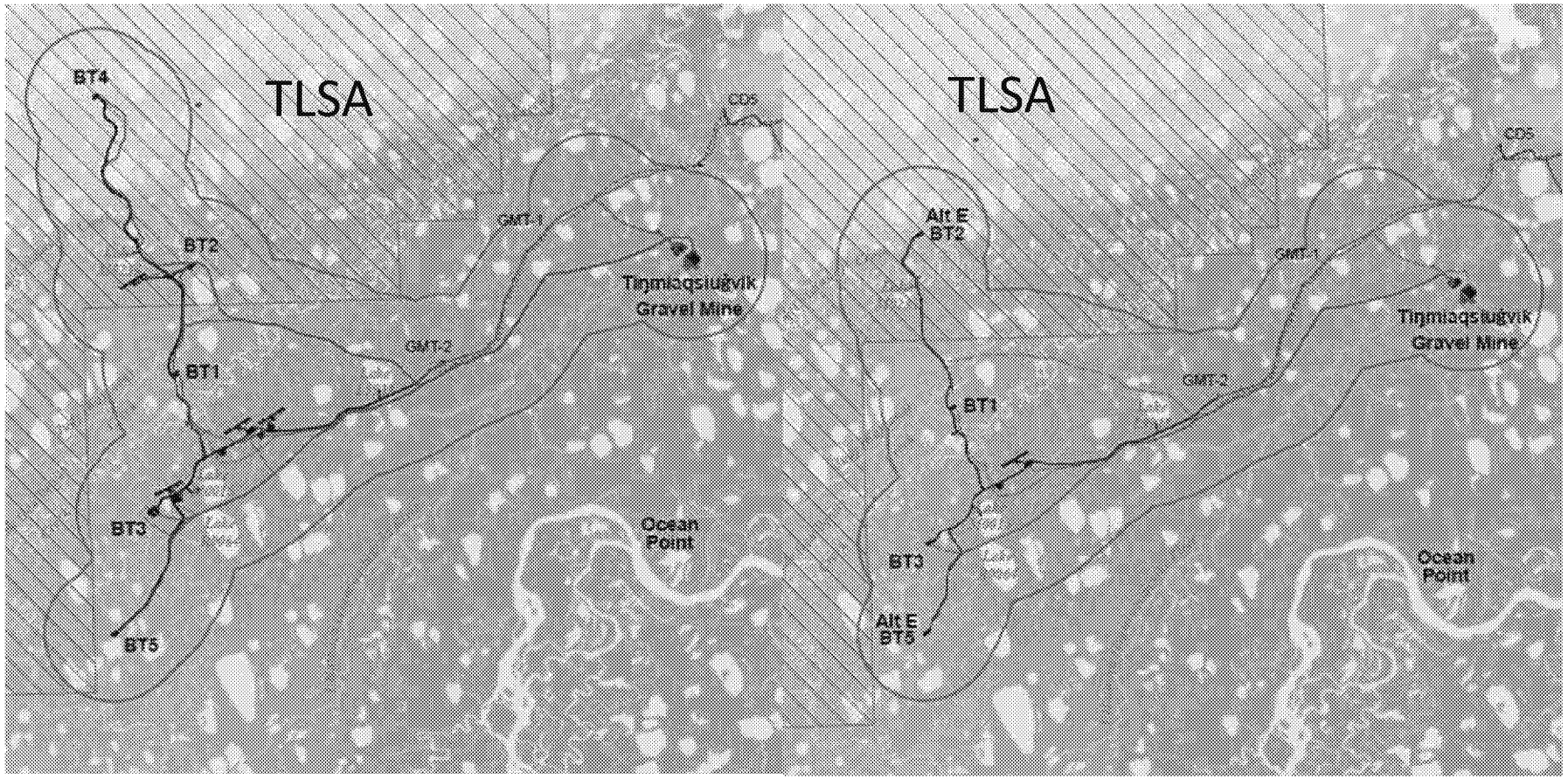
New Findings / Comparison with Previous Preferred Alternative

- Reduced infrastructure within TLSA
  - Occurs in lesser used portion of the analysis area
    - Alt B – 73% of harvesters
    - Alt E – 67% of harvesters

Alternative E with Nuiqsut Subsistence Use Areas (All Resources)

Alts B, C, D

Alt E



New Findings / Comparison with Previous Preferred Alternative

- Primary difference under Alt E relates to **resource availability**:
  - Reduction in infrastructure within TLSA may lessen impacts to caribou movement
  - Still have road infrastructure and access/infield road “pinch” point

New Findings / Comparison with Previous Preferred Alternative

- Other differences between Alt E and Alt B
  - Reduction in road length to the west of the community (between BT3 and BT5)
  - Slight reduction in air (fixed wing flights) and ground traffic under Alternative E compared to Alternative B
  - One less winter season of gravel mining and placement

Questions/Discussion